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By

Gerald F. King

Michigan State University

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Psychological Monographs: General and Applied

A Theoretical and Experimental Consideration of the Rorschach Human Movement Response[1]

GERALD F. KING[2]

Michigan State University

MANY Rorschach investigators consider the human movement response *(M)* to be Rorschach's most original contribution to his method of personality study. In general, the meanings assigned to *M* by Rorschach have been adhered to quite closely by later clinical and research workers. Although numerous Rorschach studies have been reported, it is surprising that in view of the importance that is given to it in the Rorschach method so little has been done (*a*) to validate the meanings attributed to *M* and (*b*) to search for other meanings it may possess. This latter point seems to be characteristic of present Rorschach theory, and the need for remedial action is beginning to be emphasized in the literature (**8, 12**).

Rorschach viewed *M* as a multidimensional concept, positing several interpretations for this response. While meaning is attributed to *M* as a single variable, he based his analysis of personality upon the relationship between *M* and color responses (*C*). According to the proportion of *M* to *C*, this ratio is classified as one of several "experience types." The following six interpretations of *M* and the experience types are cited by Rorschach (**33**) and probably represent the most common views in the literature.

Intelligence. Rorschach pointed to the relationship between *M* and intelligence by stating, "In normals, the number of *M* responses rises in proportion to the productivity of the intelligence, the wealth of associations, the capacity to form new associative patterns" (p. 26).

Creativity. He seems to have primarily considered *M* to be a measure of inner life or introversion which manifests itself in creativity and imagination. It is designated as the "capacity for 'inner creation' " (p. 65.)

Suggestibility. An inverse relationship is proposed for this variable and *M;* the "greater the number of *M*'s in the experience type formula, the less suggestible is the subject" (p. 100).

Emotional stability. The relationship between *M* and emotional expression is described as "the more the kinaesthesias [*M*], the more stable the affect" (p. 76). According to Rorschach, *M* functions to counterbalance emotional reactions (*C*), and thus the *M* experience type (*M* greater than *C*) is characterized by stable affective reactions rather than impulsiveness.

Rapport. The *M* experience type reflects "more intensive than extensive rapport" (p. 78). Intensive rapport is illustrated in individuals whose relationships with others are few but likely to be very close ones. This is opposed to the capacity for extensive rapport found in the *C* experience type, where relationships with others are easily formed but likely to be superficial.

Empathy. That the capacity for empathy is equally dependent upon *M* and *C* responses is indicated by the following statement by Rorschach: "Individuals capable of empathic relationships with others must include in their

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[1] The data for this investigation were collected at Veterans Administration Hospital, Battle Creek, Michigan. A more detailed report is available (**18**).

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make-up certain introversive and extratensive elements" (p. 99). In general, the limitations for empathic relationships are emphasized, as attested by the suggestion that "genuine" empathy can only occur between two individuals of similar experience types.

The foregoing interpretations of *M* constitute the focus of an exhaustive and critical survey of Rorschach validation studies. (**18**). The results present a discouraging picture. For example, in approximately a third of the studies dealing with intelligence, no relationship was found between *M* and various measures of intellectual ability. Significant correlations, when obtained, were usually quite small. If the variance contributed by *R* (number of Rorschach responses) had been accounted for in all the statistical analyses, the correlations would undoubtedly have been even smaller, and some even reduced to insignificance. The validation studies pertaining to creativity and suggestibility have produced equally inconsistent results. None of the other interpretations of *M, as formulated by Rorschach,* have received direct experimental attention. The latter situation is somewhat understandable if the rather elusive terminology used in the definitions is considered. The conclusion that one is forced to draw is that the validity and, hence, usefulness of these six interpretations of *M* are certainly questionable.

The present investigation has the following two objectives: (*a*) to reformulate the interpretation of the Rorschach *M* response and (*b*) to provide an empirical test of this revised interpretation of *M*.

The Rorschach Human Movement Response and Interpersonal Relationships

Interpersonal Conceptions of M

An *M* response essentially indicates the readiness of subjects to perceive and accept ambiguous stimuli (inkblots) as representing human beings (*H*) engaged in some type of activity. The content category of *H* is commonly interpreted by Rorschach diagnosticians as indicating the subject's interest in human beings. For this reason, it remains a puzzle as to why interpersonal relationships haven't been emphasized more in the interpretation of *M*. Although Rorschach touched upon this area in his discussion of rapport and empathy, the lead has largely been neglected until recently by the theorists that have followed him. The following represent some of the theoretical overtures that have been made in this direction.

In his "nuclear" definition, Piotrowski states that *M responses* "always reveal the subject's conception of his role-in-life" (**30**, p. 560). Bochner and Halpern relate *M* to the concept of identification, which they describe as the "ability to put oneself in the place of another or to put oneself in different situations" (**7**, p. 40). Schachtel (**35**) and Frankle (**11**) view *M* in terms of empathy, essentially defined as the ability to understand other people. Similarly, the principal emphasis of Phillips and Smith (**28**) in their interpretation of *M* is on empathy, which is conceptualized in terms of role taking and role assigning. Although still accepting most of the standard interpretations of *M*, Klopfer et al. also consider it to be related to the "capacity for good empathic relationships with other human beings" (**20**, p. 264). As can be seen, most of the current interpersonal conceptions of *M* represent modifications and less restrictive extensions of Rorschach's notion about the relationship between *M* and empathy.

Although somewhat meager, there is some evidence from research that seems pertinent to the relationship between *M* and interpersonal relationships, in general, and empathy, in par-

ticular. It is apparent from Dymond and Cottrell's discussion (9) of the concept of empathy that empathic behavior involves among other things a knowledge of, an awareness of, a sensitivity toward, or an understanding of the self and others. In light of this, Barrell (2) obtained small but significant positive correlations between the number of *M* and ratings on "insight into himself" and "insight into others," although the latter correlation dropped to insignificance after *R* was statistically controlled. Using the Sheviakov and Friedberg Interest Inventory (37), Schwartz (36) found that the number of *M* was slightly but significantly related to items interpreted as measuring "identification with others" and items measuring "self-acceptance."

Although it is open to methodological criticism, an interesting study by Hertzman and Pearce (13) points to the relevance of *M* in regard to many aspects of interpersonal relationships. With the objective of discovering the meaning of *M* and *H* responses of their subjects from material obtained in therapeutic interviews, they report that the personal meaning of the majority of these Rorschach percepts could be determined. All identified responses were empirically classified, with the majority being labeled "self-identification." Other categories were as follows: self-identification plus attitudes toward the world, characteristics of interpersonal relationships plus self-identification, the world around me, parents and parent substitutes, negative identification with a parental figure, and rejection of a possible role.

Perhaps, the most substantial evidence in this area comes from research by Frankle (11). Hypothesizing that *M* reflects the ability to empathize with and understand other people, he used as his criterion group social work students engaged in case work. On the basis of the number of *M* with good form, he was able to predict significantly better than chance the adequacy of the students as determined by two measures of effectiveness in forming interpersonal relationships. In a similar vein, Holt (20) reports that in the Menninger study of resident psychiatrists the top eight men, on the basis of pooled ratings of empathy, produced significantly more *M* than the bottom eight.

A Point of View

Some theoretical viewpoints and empirical evidence that point to a relationship between *M* and empathy have been considered. Accepting this interpretation of *M* on a tentative basis, at least, the question might be asked: How universal or basic is this meaning of *M*?

Beck (5) distinguishes between the significance of a Rorschach determinant found in patients and the same one when it occurs in superior nonpatients. Kornreich's data (22) suggest that the meanings of test scores, including Rorschach indices, can vary when different "personality types" are involved. This does not necessarily preclude the existence of universal meanings, but it does emphasize that many meanings assigned to Rorschach symbols are collateral or "conditional" ones, to use Piotrowski's distinction (30). Collateral meanings must be compatible with universal meanings, but their applicability is dependent upon the context in which the symbol appears (e.g., personality structure of the subject, other symbols present, etc.).

With the foregoing in mind, *M* might be examined in regard to psychopathology. The general consensus in the literature is that the number of *M* given by neurotics and schizophrenics is below that found in normals (3, 31, 40). These results are quite compatible with a correlation between *M* and empathy. Dymond and Cottrell (9) propose that empathic phenomena are the critical factors in human adjustment, and Hoskins (14) considers the fundamental manifestation in schizophrenia to be a loss of empathy. However, there is one outstanding exception for Rorschach findings in psychopathology, namely, paranoid schizophrenia. Reports in the literature reveal that *M* responses are fairly high for this diagnostic category (3, 21, 31, 33, 42). It is quite evident that the paranoid schizophrenic cannot place himself in the "psychological shoes" of others since his delusional thinking shows glaring inaccuracies in his perception of not only his own role but also that of others. Only by accepting his "pseudo-community" could he be credited with empathy. Here, then, is an example where the relation-

ship between *M* and empathy breaks down.

In further consideration of the paranoid schizophrenic, perhaps the chief characteristic of this diagnostic classification is the rich, although inaccurate, fantasy life involving people. For example, the belief may be held that various people in his environment are attempting to persecute or kill him, often in ingenious ways; and he may imagine himself to be some important figure, such as the King of Siam, with enormous power. If the illustration of paranoid schizophrenic behavior is considered to have relevance for the meaning of *M*, the "capacity for interpersonal fantasy" may be used as a tentative point of departure. This orientation seems to be particularly compatible with one of the few studies investigating *M* and creativity where positive, albeit questionable (**18**), results were obtained. In this study, Vernier and Kendig (**43**) found a very high relationship between *M* and fantasy productions on the TAT rated for creativity. A closer examination of this research reveals that the stimuli on all the TAT cards used were people. When the results are now interpreted as indicating the more *M* the more creative is the *interpersonal* fantasy, the consistency of the research with the proposed orientation can readily be seen.

It is apparent that this interpersonal fantasy should not be considered as one exclusively focused upon empathic behavior. The paranoid's fantasy life would attest to this. The data provided by Hertzman and Pearce (**13**) in the attempt to determine the personal meaning of *M* responses show such classifications as "negative identification with a parental figure" and "rejection of a possible role," hardly empathic in nature. It seems more feasible to assume that it encompasses the total area of interpersonal relationships.

Stated in capsulated form, the following formulation of the basic meaning of *M* is suggested: *M reflects the ability in fantasy to project the self into time and space in the interpersonal sphere.* The dimension of interpersonal space refers to the various possible settings for interpersonal behavior or the range of roles available to humans. It seems to be illustrated in part, at least, by the following statement by Piotrowski: "Persons with a large number of *M* show more awareness of the complexities of human relationships than those with few or no *M*" (**30**, p. 568).[3] In addition to this cross-sectional dimension, there is the temporal factor in the interpersonal sphere, which is both illustrated and supported by some findings reported by Roe (**32**). Her results reveal that the number of *M* correlated significantly with the tendency for her subjects to complete their TAT stories by including a future. The specification of the dimension of interpersonal time seems also to receive some justification from the following observations of patients made by Singer and Spohn: "To some extent those individuals who reported tendencies toward active fantasy lives such as heroic daydreams or reviewing of past or future plans tended to fall in the High-*M* group [while] . . . *S*s who showed Low-*M* production . . . reported that they tended to lose themselves in viewing television or in focusing on minute bodily changes with consequent somatic delusions" (**39**, p. 6).

If this basic interpretation of *M* is to be comprehensive and consistent, it

[3] In a recent study, Bieri and Blacker (**6**) found that the number of *M* was significantly correlated with the complexity of the subjects' perceptions of people, as measured by Kelly's Repertory Test (**16**).

should provide an explanation for the results obtained by Frankle (11) and others, who found a relationship between *M* and empathy for normals. The ability to indulge in interpersonal fantasy, as indicated by *M*, should certainly facilitate empathy when it is in the presence of other crucial factors (e.g., factors crucial to normality). As revealed by Kornreich's data (22), the type of personality structure is an important consideration in the meaning of test scores. Hence, empathy would be a collateral meaning of *M*.

Implications for Psychopathology

The postulated basic meaning of *M* was the ability in fantasy to project the self into time and space in the interpersonal sphere. Since the functional psychopathological disorders are viewed as illnesses which fundamentally represent disturbances in interpersonal relationships, it is suggested that *M* has certain implications for the maladjusted individual's orientation to his illness. In the sense that a psychiatric illness represents a problem for the individual, it is proposed that *M* is related to the individual's orientation to his problem in terms of his perception of the nature of the problem, his perception of the origin of the problem, his reaction to the problem, and his view of the future.

It would seem to follow from the basic meaning of *M* that the more *M* produced on the Rorschach the more interpersonal space would be available for fantasy, which would result in a greater awareness of the complexities involved in interpersonal relationships. In the case of fantasy limited in interpersonal space, there would be a reduced awareness of the significance of human interaction for the self. Hence, it would be expected that a low amount of *M* produced by an individual who is mentally ill to be associated with a tendency for the perception of the illness to be more localized or restricted to the self. Such an individual would be more apt to see his problem in terms of somatic complaints, unexplainable tenseness, and the like, or even deny any debilitation. With high *M*, it would be more likely that the problem would be regarded as being in some way related to interaction with other people.

The dimension of time in the interpersonal sphere ranges from past to future events. Like the dimension of interpersonal space, the extent to which interpersonal time could be utilized in fantasy would vary with the number of *M*. In regard to psychopathology, the literature abounds with reports attesting to the influence of childhood and adolescent experiences on adult personality problems. In mental disorders, the expectation would be that the individual who produces few *M* would be less able to project himself backward in time in accounting for the origin of his illness. He would tend to point to events in the immediate past, while the person high in *M* would be more likely to consider interpersonal experiences in the more distant past as contributing to his present problem.[4]

[4] While the majority of human experiences probably possess some interpersonal element, many human events seem best classified as "non-interpersonal." The interpretation of *M* that has been formulated does not preclude people low in *M* from connecting non-interpersonal events from the distant past with their problems. However, to the extent that past events become interrelated, sequentially or otherwise, interpersonal events would serve as important cues in the perception of the past. Thus, *M* may be related to more than just interpersonal time on the basis that interpersonal cues facilitate the projection of the self backward in time in general. This would mean that since individuals low

At the other end of the time continuum is the future. In a similar vein, the expectation would be that the number of *M* is related to the individual's ability to project himself beyond his illness into the future. As compared to those high in *M*, people low in *M* would have more difficulty in outlining plans and formulating goals for future action.[5]

The reaction to an illness can be described in terms of many mechanisms that the individual can use to cope with his problem. These mechanisms differ from each other in such characteristics as personality level involved, degree of pathology, direction, and so forth. A person, for example, might contend with his problem by attempting to "cast it from his mind," similar to the Freudian mechanism of suppression. On a different level would be the attempt to escape the problem through indulgence in alcohol. Numerous other methods of dealing with problems could be cited. Interpersonal fantasy appears to provide not only a means of escaping a problem (e.g., daydreaming) but also a mechanism for mulling over a problem in the direction of a solution. The degree to which an individual could indulge in interpersonal fantasy in regard to his illness would be related to the number of *M* responses produced on the Rorschach. The prediction would be that a person low in *M* would be more likely to use such mechanisms as suppression, denial, and other avoidance measures in combating his problem.

Hypotheses

Certain relationships between Rorschach *M* and the psychiatric patient's orientation to his illness or problem have been derived from the basic interpretation of *M* that has been proposed. Predictive statements were made specifically in regard to (*a*) the perception of the nature of the problem, (*b*) the perception of the origin of the problem, (*c*) the reaction to the problem, and (*d*) the perception of the future. In order to test these implications for psychopathology, the following hypotheses have been formulated for an empirical test with functional neuropsychiatric patients:

1. The High-*M* producers will show a greater tendency to recognize their problems (illnesses) as involving disturbances in interpersonal relationships than the Low-*M* producers.

2. The High-*M* producers will show a greater tendency to project themselves backward in time in accounting for the origins of their problems than the Low-*M* producers.

3. The High-*M* producers will show a greater tendency to utilize interpersonal fantasy in coping with their problems than the Low-*M* producers.

4. The High-*M* producers will show a greater tendency to project themselves beyond their present problems into the future than the Low-*M* producers.

Methodology

The Controlled Interview

The principal instrument selected for obtaining the data to test the hypotheses was the controlled interview. The advantages of such an approach are that it offers flexibility and directness. The chief

in *M* are less aware of interpersonal events, they would have fewer interpersonal cues available to them, resulting in their being less likely to associate events (interpersonal or non-interpersonal) of the distant past with their problems.

[5] In the matter of the relationship between *M* and interpersonal plans and goals and non-interpersonal plans and goals, the discussion in the preceding footnote seems applicable.

criticism would appear to be directed at the question of reliability. It was felt that this problem could be overcome if careful planning went into the construction of the interview.

The outline of the interview was developed through numerous trial administrations. Further refinements were made on the basis of a formal pilot study. The following constitutes the final revision of the outline as it was used by the interviewer in his contact with the subject. (Each section of the interview has been given a parenthetical introduction, the content of which indicates the hypothesis to which the section is related.)

Introduction. As a patient here in the hospital, the hospital staff is interested in you and your problem. If we are to help you, we must get certain information about you. I am going to ask you some questions. I would like you to listen carefully and to answer the questions the best you can. Think each question over before answering. I would appreciate your talking slowly because I want to write down as much as I can of what you say.

1. (Nature of the Problem) Like every person who comes to this hospital, there is a reason. We will call this your problem. Now, first of all, I would like you to tell me in your own words what your problem is.

(If hesitant, the subject should be encouraged. The question can be repeated and paraphrased. If paraphrasing is necessary, only minor variations should be used. If the subject's account of his problem is brief and confined to such general descriptive terms as tense, nervous, emotionally upset, etc., more information should be obtained by asking the general question: "What are you tense (nervous, etc.) about?" At the end of the subject's account, he should be asked: "Anything else?")

2. (Origin of the Problem) Now, everything has a beginning. Sometimes things go pretty far back in the past and build up gradually. Sometimes things happen suddenly without much of a build-up. Think it over carefully and tell me when your problem first began.

(As before, repetitions and paraphrasing are permissible. If, at the close of the subject's account, nothing is mentioned in regard to his childhood or adolescence, he should then be asked: "Was there anything in your childhood or teens that you might connect with your problem?" When the subject perceives the origin of his problem as being in the immediate past, it may be necessary to ask: "Was there anything in the Service (Army, Navy, etc.) that you might connect with your problem?")

3. (Reaction to the Problem) When a problem comes up, people usually try to deal with it. Different people use different ways or methods. I would like to know what your approach has been to your problem. Let me read you some possible ways that have all been used by others.

(The interviewer then reads seven methods printed on separate cards, placing the cards on the table in front of the subject as he reads them.)

Now you can read them over. Pick out any that apply to you. Pick out any of the methods that you have used at one time or another.

(If the subject picks out more than one, the interviewer then asks the subject to rank the methods in regard to frequency of use. If several methods are selected, the interviewer can instruct the subject as follows: "Now I want you to rank these methods according to how much you've used them. The one you've used most would be first, the one that you've used next most frequently would be second, and so on." If the unselected methods number more than one, the interviewer points to these methods and states: "Now you didn't pick these methods because you've used them very seldom or not at all. Now I want you to rank these methods the same as you did the others. It may be more difficult, but I'm sure you can do it." After this is accomplished, the subject is then asked: "Have you used any methods not listed here?")

4. (View of the Future) Last of all, I would like to turn to the future. What are your plans or goals for the future?

(If the subject can't give any plans, he should be encouraged with: "Do you have any plans at all?" If plans are given, he should be asked: "Do you have any other plans or goals?" Since the inquiry in this section is more general than in the others, it will probably be necessary to ask more than the usual number of questions. The time element should be obtained in every case; e.g., when he plans to do this, how long will it take him to accomplish this, etc. Unless the subject includes this topic in his answer, he should be questioned about any long-range goals he may have. He should be asked: "Do you have any plans or goals for the more distant future, let's say, five years from now?")

Part 3 of the interview (Reaction to the Problem) allows the subject to choose from seven methods of dealing with psychiatric problems. These methods were derived from case histories, therapy

notes, and related sources. The final selection and revision of terminology was accomplished after the pilot study. The following are the methods that were used, along with provisional descriptive classifications and the order of their presentation to the subjects:

(A) I try to handle my problem by avoiding any thinking about it. I often keep myself very busy which helps to take my mind off it. (suppression)

(B) I try to handle my problem by relying on hope and faith. It helps if you believe that it won't alway be like this. (mysticism)

(C) I try to handle my problem by using my imagination. It helps to give me relief if I daydream that people and things are different from the way they actually are. (interpersonal fantasy, nonreality)

(D) I try to handle my problem by ignoring it. It helps if I exercise my will power and act as if it didn't exist. (denial)

(E) I try to handle my problem by pushing it aside. It helps to give me some relief from it if I drink. (escapism)

(F) I try to handle my problem by thinking about myself in relation to others. It can help to find a solution if you think about it from different angles. (interpersonal fantasy, reality)

(G) I would try to handle my problem but there's nothing I can do. Nothing would work so it's useless to waste your effort trying to do something. (passive defeatism)

In terms of their directional relationship to the problem, these methods can be considered to consist of five that express attempts to avoid the problem (A, B, C, D, and E), one that expresses an attempt to confront the problem (F), and one that expresses a passive acceptance of the problem (G). Methods C and F represent the ones employing interpersonal fantasy, the first being an avoidance and the second a confronting method.

Procedure

The interview and other techniques of this investigation were administered to 100 recently admitted, male neuropsychiatric patients at a Veterans Administration hospital. In 76 cases, the length of hospitalization was less than three weeks, while the length of hospitalization was less than five weeks for the remaining 24 subjects. All patients admitted to the hospital during a period of seven months were screened by an examination of the notes provided by the admitting psychiatrist and by a brief interview. The patients were evaluated on the following criteria, which governed the selection of subjects: (*a*) cooperative attitude, (*b*) minimal confusion (no active hallucinations or delusions), (*c*) no evidence of brain damage, (*d*) approximately average intelligence or better, (*e*) not above 45 years of age, and (*f*) limited previous psychotherapeutic contacts.

The schedule for the controlled interviews called for the systematic rotation of four interviewers, who, with the exception of one individual, were hospital staff psychologists possessing the Ph.D. degree. Every other subject of the first 50 cases was reinterviewed six to eight days later by a different interviewer. The outline was followed quite rigidly in the conduct of the interviews and reinterviews. The reinterview was essentially a repetition of the interview except for the introduction. None of the interviewers had the dual role of interviewing and administering tests (e.g., Rorschach) to the same subject, nor did any of the interviewers have access to the subject's test scores.

In the first 20 interviews, the length of time required ranged from 17 to 67 minutes, with the median time being 29.5 minutes. Both the interviews and reinterviews were recorded as close to verbatim as possible by the examiners. Typewritten copies were made of the 100 interviews and 25 reinterviews.

Within 48 hours of the controlled interview, the Rorschach and Wechsler-Bellevue Verbal Scale (Form I), in that order, were administered to all subjects. The testing preceded the interview in 43 cases and followed it in 57. The test administrators were advanced trainees in clinical psychology, with the Rorschach instructions being in accordance with Beck (4). After an interval of 13 to 15 days, the Rorschach was readministered by different examiners to 30 subjects, every other subject in the first 60 cases being selected (usually subjects not reinterviewed).

All subjects were also rated for "coopera-

TABLE 1

COMPARISON OF THE HIGH-*M* AND LOW-*M* GROUPS ON AGE, VERBAL INTELLIGENCE, AND EDUCATION

Groups	*N*	Age			Verbal IQ (WB)			Education		
		M	Range	*SD*	*M*	Range	*SD*	*M*	Range	*SD*
High-*M*	30	30.47	21–44	6.26	110.53	85–130	10.92	11.50	7–17	2.34
Low-*M*	30	31.80	21–44	5.85	109.33	87–131	9.83	11.83	7–17	2.19

tion" on a seven-point scale and "confusion" on a six-point scale by two independet judges. Cooperation and confusion were considered to be variables that could have an important influence on the patient's performance in an interview situation.

Subjects

The Rorschach performance of the 100 subjects constituted the basis for selecting High-*M* and Low-*M* groups. The number of *M* ranged from zero to nine, with 26 subjects falling at zero, 25 at one, 18 at two, and 31 producing three or more *M*.[6] Using three or more *M* as the criterion for the High-*M* group and one or less *M* for the Low-*M* group yielded preliminary groups of 31 and 51 subjects, respectively. The two preliminary groups were adjusted on the basis of age, verbal IQ, and Rorschach *R*, and it was possible to form two final groups of 30 subjects each, which were equated for these variables. Table 1 shows that the resulting High-*M* and Low-*M* groups were not only equated on age and verbal intelligence but also on education.

The High-*M* and Low-*M* groups were quite similar in the matter of diagnostic composition, as indicated by Table 2. Each group contained 21 psychotics and nine nonpsychotics, with only minor differences in regard to diagnostic subtypes. All the psychiatric disabilities were classified as "military service-connected." What is probably more important is that the two groups were equated on the variables of cooperation and confusion.

TABLE 2

DIAGNOSTIC CHARACTERISTICS OF THE HIGH-*M* AND LOW-*M* GROUPS

Diagnosis	Groups	
	High-*M*	Low-*M*
Schizophrenia, undifferentiated type	13	15
Schizophrenia, paranoid type	8	6
Total psychotics	21	21
Passive-aggressive personality	2	5
Emotionally unstable personality	2	1
Inadequate personality	2	0
Antisocial personality	0	1
Total personality disorders	6	7
Anxiety reaction	3	2
Total psychoneurotics	3	2
Total subjects	30	30

The two groups were also compared on Rorschach scores other than *M*. The following Rorshach variables, as utilized by Beck (4), were selected for this purpose: number of responses (*R*), percentage of accurate forms (*F* + %), number of popular responses (*P*), number of whole responses (*W*), sum of the shading responses (*Y*+*V*+*T*), number of color-dominant responses (*CF*+*C*), and number of form-dominant color responses (*FC*). In addition, the number of *FM*, Klopfer's animal movement response (21), and the number of *m*, Piotrowski's

[6] This tabulation refers only to *M*, both good and poor form, associated with *W* and *D*. Such a small percentage of *M* occurred with *Dd* that this type was eliminated.

TABLE 3

COMPARISON OF THE HIGH-*M* AND LOW-*M* GROUPS ON OTHER RORSCHACH SCORES

Rorschach Variables	Groups[a]			
	High-*M*		Low-*M*	
	M	*Mdn*	*M*	*Mdn*
FM	2.73	2.06	2.23	2.10
m	0.87	.62	0.77	0.50
FC	2.97	2.83	2.43	2.16
CF+C	1.97	1.75	1.97	1.64
Y+V+T	5.17	5.00	5.33	5.00
W	6.63	5.00	5.47	4.50
P	7.23	7.10	6.17	6.00
F+%	76.90	75.00	79.83	79.00
R	26.27	25.83	26.83	26.50

[a] None of the differences between the groups are statistically significant according to *t* tests between means or median tests (chi square).

inanimate movement response (**30**), were included. The protocols were scored for these variables by the author in collaboration with an experienced Rorschach scorer. Table 3 reveals that there were no statistically significant differences between the two groups on any of these Rorschach variables.

In summary, the High-*M* and Low-*M* groups were equated for age, verbal IQ, education, diagnostic status, cooperation, confusion, and nine Rorschach scores.

Treatment of the Data

It was necessary to construct scales or devise scoring schemata for the interview data in accordance with the hypotheses of the investigation. The scales and scoring schemata will be discussed as they pertain to each section of the interview and, thus, each hypothesis.

Nature of the Problem

In this area, the scale was concerned with the extent to which the subject viewed his problem (illness) as involving disturbances in interpersonal relationships. Designated "interpersonal awareness of the problem," this variable was considered to vary in amount along a continuum, ranging from a complete lack of interpersonal awareness to an extensive awareness of interpersonal factors. The results of the pilot study with a preliminary rating scale suggested that the following four categories could be used to represent points on the dimension of interpersonal awareness of the problem.[7]

1. *Self-Oriented.* In its extreme form, the description of the problem is confined to somatic symptomatology (e.g., headaches) and/or anxiety features (e.g., tenseness). These symptoms may or may not be explained by non-interpersonal events (e.g., overwork, noises, drinking) but not by interpersonal factors.

2. *Limited Interpersonal Awareness.* The primary focus in the description of the problem is upon somatic and/or anxiety phenomena (self-oriented symptomatology), but there is some recognition of interpersonal factors (e.g., I have headaches, and I think my wife's nagging makes them worse). Interpersonal awareness is of secondary importance, and it is limited and narrow in scope.

3. *Narrow Interpersonal Awareness.* Primary consideration is given to interpersonal influences in the description of the problem, but the interpersonal referent is of a restricted nature. It is confined to a special group or type of people (e.g., family, wife, foremen, friends). If present, self-oriented symptomatology is of secondary importance.

4. *Broad Interpersonal Awareness.* An extensive interpersonal awareness is revealed in the description of the problem, as attested by such a broad interpersonal referent as people and its variations (e.g., society). The area of social interaction is not limited to a special group or type of people. Self-oriented symptomatology may be included in the description of the problem in any degree of importance.

Origin of the Problem

The data in this section required a scoring schema which would quantify the "distance" in the past that the subject projected himself in accounting for

[7] A more detailed rationale for this scale is presented elsewhere (**18**).

the origin of his problem. The variable could be called "temporal-distance awareness of the origin of the problem." The following three categories were selected as the final points on this dimension.

1. *Childhood Period.* 10 years of age or under.
2. *Adolescent Period.* 11 to 20 years of age.
3. *Military Service Period.* The subject's tour of military duty.

Reaction to the Problem

This part of the interview employed the previously mentioned seven methods of coping with a psychiatric problem. The following information was obtained from the interview.

1. *Free Choice.* The number and type of methods selected by the subject.
2. *Ranking.* The ranks of all the methods in terms of frequency of use by the subject. (Methods not selected in the Free Choice were force ranked.)
3. *Supplementary Methods.* The subject's report of any additional methods that he used.

The Supplementary Methods were classified as either "interpersonal" or "non-interpersonal." An interpersonal method was defined simply as one that "involves overt or covert interaction with other people."

View of the Future

In this section, the following three measures were obtained on the plans and goals given by the subject: range of plans (number of areas encompassed by the subject's plans), interpersonal plans (number of plans cited involving interpersonal relationships), and long-range plans. Rating scales were constructed for the first two measures. What was considered to be "long-range plans" was indicated by the subject's response to the question as to whether or not he had any plans for the "more distant future, let's say, five years from now." Long-range plans were simply scored for their presence or absence.[8]

In addition to the data from the pilot study, the interview material for the 40 subjects not selected in the High-*M* and Low-*M* groups was used in the construction of the two rating scales. This procedure seemed necessary to provide a more adequate frame of reference for the raters. With more data to draw from, a greater variety of examples could be cited for the rater to make his task more explicit. The following are the rater-instructions for the two scales.

Range of plans. The scoring system is concerned with how many *areas* the subject's plans encompass. The following list of areas and examples of related plans was formulated as a guide.

Acquisition. Get a home. Make payments on our house. Buy a car. Sell my house.

Business. Own my own business. Buy a farm. Operate a restaurant.

Family. Raise a family. Support my father. Educate my children. Leave my family.

Financial. Pay off my debts. Save money. Borrow money. Get a pension.

Health and Well-Being. Get myself in shape. Get readjusted. Learn to face things. Quit drinking. Try to be happy (or normal).

Marriage. Get married. Get my wife back. Get a divorce.

Recreation. Get more recreation. Go hunting. Spend more time on my hobby.

Residence. Get out of this climate. Move to California.

Religion. Start attending church. Practice what the Bible says.

Socialization. Make some friends. Win the respect of others. Help others. Stay away from people.

Training. Go to college. Take some aptitude tests. Learn a trade.

Work. Get a job. Go back to my work. Change jobs.

Record the number of areas covered by each subject's plans. It is the number of areas, not individual plans, that is to be scored. For ex-

[8] An attempt to classify the long range plans as either "interpersonal" or "non-interpersonal" had to be abandoned. Responses to this question in the interview seemed to be particularly brief and ambiguous, making the task of classification very difficult.

ample, three different plans that could all be classified under "Family" would be tabulated as one area. In the case of plans that do not appear to be relevant to any of the above areas, credit should be given for additional areas.

Interpersonal plans. The preceding scoring system dealt with plan-areas; this one is focused upon the smaller unit: plans. More specifically, it is concerned with how many of the subject's plans involve interpersonal relationships.

In any plan in which it is present, the interpersonal component may be peripheral or central in its importance to the plan. The type of interpersonal relationship involved will also vary. To assist the rater, the following list of types of interpersonal relationships, along with examples of plans, is provided.

Direct interactive. (a) Approach: Get married. Live with mother. *(b)* Avoidant: Divorce my wife. Get away from people.

Causal-motivational. Leave this climate, because it's bad for wife. My mother would like me to go back to school.

Conditional. If my wife lets me, I'll go hunting. I'll buy this farm provided Mr. Smith will sell.

Descriptive-associational. Like a lot of people, I want a home. Move up North; the people are nice there.

The interpersonal component, itself, will usually be directly stated, but in a few cases it may be merely implied. Examples of the two types of interpersonal expression would be as follows: explicit (people, wife, we, anyone, Agnes); implicit (without discouragement at home, make the right contacts, get married).

Record the number of plans involving interpersonal relationships for each subject. Repetitions of the same plan do not count as additional plans.

Reliability of the Various Measurements

The Controlled Interview

The measurements derived from the interview present two problems of reliability. In the quantification of qualitative data, the interrater or interscorer agreement must be considered. There is also the more basic concept of reliability which refers to the consistency or stability of the measurements, i.e., how stable are the interview data, or how reliable are the subject's responses to the interview questions. In regard to the former aspect of reliability, all interviews and reinterviews were independently scored by three raters on all the scales that depended on judgments. The 25 reinterviews that were conducted six to eight days later provide a means of estimating the stability of the measurements.

Nature of the problem. The percentages of agreement among the raters for interpersonal awareness of the problem were 90, 92, and 98, resulting in the mean percentage of agreement of 93.3. The interview-reinterview agreement was 92%. (In making interview-reinterview comparisons on all the rating scales, scores were assigned to the subjects by using the consensus of the ratings.)

Origin of the problem. The temporal-distance awareness of the origin of the problem was scored more or less mechanically from the interview, being relatively free of judgment. The interview-reinterview agreement was 100%.

Reaction to the problem. The free choice and ranking of methods provided objective scores. A total of 58 supplementary methods was given. The percentages of agreement among the raters in classifying the methods as either "interpersonal" or "non-interpersonal" were 86.2, 89.7, and 93.1, with the mean being 89.3. In the interview-reinterview comparison, 16 of the 25 subjects cited supplementary methods in the interview, and all but one repeated in the reinterview. Of the repeaters, one changed in his type of method. Supplementary methods were also given by three additional subjects in the reinterview. Thus, the percentage of agreement was 80.

In the free choice, the agreement between the methods selected in the interview and the reinterview was only 24%. The reason for the low level of agreement is that there was a significant increase in the number of methods selected in the reinterview ($t = 5.67$); 19 out of 25 subjects selected more methods. The explanation for this behavior seems to lie in the interview procedure. After the free choice, the subject was asked to rank all methods, including the methods not selected. It is suggested that the forced ranking of unselected methods gave the subject a more "accepting" attitude toward these methods, which was carried over to the reinterview. Another aspect of interview-reinterview stability in the free choice is that of "inconsistencies": methods selected in the interview but not in the reinterview. In this respect, there was 96% agreement. It would appear that in the reinterview other methods were merely added on to the original selections.

This interpretation is borne out by the interview-reinterview comparison of the ranking of the methods. Rank-order correlations could be computed between the way the methods were ranked in the interview and their order in the reinterview. The 25 rhos ranged from +.07 to +1.00. Computed in accordance with Lyerly (24), the average correlation was .78, which is interpreted as the best estimate of stability in regard to the ranking of the methods by the subjects.

View of the future. Long-range plans were scored mechanically merely for their presence or absence. The method of determining the inter-rater reliability for the range of plans and interpersonal plans was designed to match the method that was to be used in the analysis of the data in regard to these two variables. Scoring was in terms of numbers, i.e., number of plan areas and number of interpersonal plans. The procedure for both variables was to combine the distributions of the three raters and compute the median. Then each subject was designated "above or below the median" for each variable. With this measure of range of plans, the percentages of agreement among the raters were 85, 85, and 87. For interpersonal plans, they were 85, 88, and 89. The mean percentages of agreement for range of plans and interpersonal plans were 85.7 and 87.3, respectively.

The interview-reinterview agreement was 80% for range of plans and 84% for interpersonal plans. The percentage of agreement for long-range plans was fairly low, being 68.

Other Variables

Rorschach M. All Rorschach protocols were scored by the author, with the number of *M* being tabulated for each subject. After the number of protocols (retests not used) was reduced by eliminating every other protocol, the remaining records were divided into two samples of 25 each. Two additional raters, each assigned one of the samples, then scored the protocols for the number of *M*. The percentages of agreement with the original scoring were 88 and 96. In the Rorschachs readministered to 30 subjects after an interval of 13 to 15 days, there was a slight, but insignificant increase in *R*. The agreement between the two test results in terms of number of *M* was 83.5%. A computed tetrachoric *r* was .87.

Cooperation and confusion. The two independent ratings on cooperation and confusion were obtained from the interviewers, test administrators, or admitting psychiatrists. The percentage of agreement was 89 for cooperation and 87 for confusion. In no case was the discrepancy between raters more than one scale point.

TABLE 4

COMPARISON OF THE HIGH-*M* AND LOW-*M* GROUPS ON INTERPERSONAL AWARENESS OF THE PROBLEM

Groups	Self-Oriented	Limited Interpersonal Awareness	Narrow Interpersonal Awareness	Broad Interpersonal Awareness
High-*M*	2	2	8	18
Low-*M*	14	11	1	4
	$\chi^2 = 29.58$ ($p < .001$)			

RESULTS

The results will be presented sequentially as they bear on each hypothesis.

Hypothesis 1

Table 4 provides a comparison of the High-*M* and Low-*M* groups on interpersonal awareness of the problem. The chi square of 29.58, which is significant beyond the .001 level of confidence, clearly indicates that the two groups were different in regard to this variable. Further, there appears to be no difficulty in interpreting the difference; it is one of direction. It can be seen by inspection of the pattern of frequencies on the scale that the High-*M* group showed a greater interpersonal awareness of the problem. The strength of the relationship is indicated by the contingency coefficient of .57.

The results, thus, confirm Hypothesis 1: it was found that the High-*M* producers showed a greater tendency to recognize their psychiatric problems as involving disturbances in interpersonal relationships than the Low-*M* producers.

Hypothesis 2

The variable involved here has been designated "temporal-distance awareness of the origin of the problem." As can be seen in Table 5, a comparison of the two

TABLE 5

COMPARISON OF THE HIGH-*M* AND LOW-*M* GROUPS ON TEMPORAL-DISTANCE AWARENESS OF THE ORIGIN OF THE PROBLEM

Groups	Military Service Period	Adolescence Period	Childhood Period
High-*M*	3	7	20
Low-*M*	17	8	5
	$\chi^2 = 25.46$ ($p < .001$)		

groups on this dimension yields a chi square of 25.46, which is significant beyond the .001 level of confidence. An inspection of the table reveals that the significant chi square is due to a difference in direction. The interpretation presented is that the subjects in the High-*M* group tended to project themselves further backward in time in accounting for the origins of their problems than the subjects in the Low-*M* group. The contingency coefficient of .55 gives an index of the strength of the relationship.

Since no provision was made for the elimination of accounts given by subjects who related their problems to non-interpersonal circumstances in childhood and adolescence, the results indicate that individuals low in *M* are less likely to associate any type of event (interpersonal or non-interpersonal) from the distant past with their problems. Further information in regard to this side issue is provided by an examination of the explanations obtained from the subjects who projected themselves as far back as adolescence or childhood in accounting for the origins of their problems. Of the 40 subjects in this category, 29 cited interpersonal events only, 8 mentioned both interpersonal and non-interpersonal experiences, and 3 gave only non-interpersonal events. The classifications were based on the collaboration of two judges. Using fourfold tables and Fisher's exact method (**10**, pp. 96–97), no difference was found between the High-*M* and Low-*M* groups in terms of the type of event cited. However, the proportion of 29 out of 40 is significantly greater than chance at better than the .01 level of confidence ($\chi^2 = 8.10$). This finding suggests that if an individual does relate events in the past to his problem, the association is most likely to be in terms of past *interpersonal* experiences.

The results, thus, confirm Hypothesis 2: It was found that High-*M* producers showed a greater tendency to associate past events with the origin of their psychiatric problems than the Low-*M* producers.

Hypothesis 3

The methods that the subjects used in coping with their problems were indicated by their selections in regard to the previously mentioned seven methods. In the free choice, the number of methods selected ranged from 2 to 7, with the median for both groups combined being 3.1. Slightly more methods were selected by the High-*M* group, but the trend was not statistically significant.

Hypothesis 3 prescribed that the High-*M* group would show a greater tendency to select interpersonal fantasy as a method than the Low-*M* group. Interpersonal fantasy was denoted by Methods C and F. Method C represented interpersonal fantasy of a daydreaming or nonreality type, while Method F represented interpersonal fantasy of a problem-solving or reality type. Relatively few subjects selected Method C, and there was no significant difference between the groups in regard to this method. Table 6 shows, however, that Method F was chosen by 25 subjects

TABLE 6

COMPARISON OF THE HIGH-*M* AND LOW-*M* GROUPS ON THE SELECTION OF METHOD F (INTERPERSONAL FANTASY, REALITY) IN THE FREE CHOICE

Groups	Method F	
	Selected in the Free Choice	Not Selected in the Free Choice
High-*M*	25	5
Low-*M*	10	20
	$\chi^2 = 15.43$ ($p < .001$)	

from the High-*M* group, as compared to only 10 subjects from the Low-*M* group. The difference is significant beyond the .001 level of confidence ($\chi^2 = 15.43$). It would appear, then, that *M* is positively related to the tendency to utilize interpersonal fantasy of the problem-solving type but not of the daydreaming type.

Due to the previous finding that the number of methods selected in the free choice increased from interview to reinterview, a more rigid test for Method F would be in terms of its being ranked first. The ranks of the methods from interview to reinterview were quite stable, and this measure would be less subject to error due to the instability of the number of methods selected in the free choice. Table 7 provides such a comparison, and it can be clearly seen that the High-*M* group tended to rank Method F first much more often than the Low-*M* group.

TABLE 7

COMPARISON OF THE HIGH-*M* AND LOW-*M* GROUPS ON RANKING METHOD F FIRST

Groups	Method F Ranked First	Method F Not Ranked First
High-*M*	16	14
Low-*M*	3	27
	χ^2 (with Yates' correction) $= 11.09$ ($p < .001$)	

Incorporating Yates' correction in accordance with McNemar (**25**, p. 207), the computed chi square is 11.09, which is significant beyond the .001 level of confidence.

The subjects were also asked to give any supplementary methods that they used in coping with their problems. A slight tendency for the High-*M* groups to give more such methods was not statistically significant. When the methods are classified "interpersonal" or "non-interpersonal," it can be seen that significantly more subjects in the High-*M* group gave interpersonal supplementary methods than in the Low-*M* group. These data are shown in Table 8. The chi square of 5.71 is significant at the .02 level of confidence.

The agreement between the way the methods were ranked in the interview and the way they were ranked in the reinterview was previously found to be quite high. The question might be asked: Is there any agreement among the subjects in each group in the way the methods were ranked? Stated slightly differently, the question would be: Are the rankings significantly related in each group? Kendall's coefficient of concordance (*W*) provides such a measure; it measures the communality of judgments for *m* observers and *n* objects (**17**). The *W* for the High-*M* group is .302, and for

TABLE 8

COMPARISON OF THE HIGH-*M* AND LOW-*M* GROUPS ON THE NUMBER OF SUBJECTS GIVING INTERPERSONAL SUPPLEMENTARY METHODS

Groups	Interpersonal Supplementary Methods	No Interpersonal Supplementary Methods
High-*M*	16	14
Low-*M*	7	23
	$\chi^2 = 5.71$ ($p < .02$)	

the Low-*M* group it is .135. Converting the coefficient of concordance to chi square by the following formula gives a test of significance: $\chi^2 = m\ (n-1)\ W$. The chi squares for the High-*M* and Low-*M* groups are 54.36 and 24.12, respectively, both being significant beyond the .001 level of confidence for six degrees of freedom. Thus, there is a significant similarity among the subjects in both groups for the ranking of the methods according to frequency of use. An examination of the two coefficients of concordance shows that there was greater agreement among the subjects of the High-*M* group than in the Low-*M* group. However, since little is known about the distribution of *W* in the non-null case when some community of preference exists, the significance of the difference between the two sets of rankings cannot be tested.

Since both values of *W* were found to be significant, there is justification for estimating the true rankings for each group. Kendall (17) has shown that the "best" estimate of the true rankings in terms of least squares would be derived by ranking according to the sum of the ranks alloted to the methods. The group rankings of the methods for the two groups are presented in Table 9. It can be seen that Method F is ranked first in the High-*M* group, while it is ranked third in the Low-*M* group. Method C also has a higher ranking in the High-*M* group than in the Low-*M* group. Actually, there appears to be considerable over-all agreement between the two sets of ranks. The rho is .75, which approaches significance ($p = .066$).

The results, thus, provide strong support for Hypothesis 3. It was found that the High-*M* producers showed a greater tendency to utilize interpersonal fantasy of the problem-solving or reality type in coping with their psychiatric problems than the Low-*M* producers. No relationship was obtained between *M* and interpersonal fantasy of the daydreaming or nonreality type. The results also indicate that the High-*M* producers displayed a greater tendency to utilize supplementary interpersonal methods in coping with problems than the Low-*M* producers.

TABLE 9

GROUP RANKINGS OF THE METHODS FOR THE HIGH-*M* AND LOW-*M* GROUPS

High-*M* Group	Low-*M* Group
F	B
A	A
B	F
D	E
C	D
E	C
G	G

Hypothesis 4

The following three measures were used to test this hypothesis: range of plans (number of areas encompassed by the plans), number of interpersonal plans, and presence or absence of long-range plans. Tables 10 and 11 offer comparisons of the two groups on the first two variables. It is evident that the

TABLE 10

COMPARISON OF THE HIGH-*M* AND LOW-*M* GROUPS ON RANGE OF PLANS (NUMBER OF AREAS ENCOMPASSED BY PLANS)

Groups	Range of Plans	
	Median[a] and Below	Above the Median
High-*M*	9	21
Low-*M*	20	10
	$\chi^2 = 8.07$ ($p < .005$)	

[a] Median is based on the total sample ($N = 100$).

TABLE 11

COMPARISON OF THE HIGH-*M* AND LOW-*M* GROUPS ON NUMBER OF INTERPERSONAL PLANS

Groups	Number of Interpersonal Plans	
	Median[a] and Below	Above the Median
High-*M*	12	18
Low-*M*	22	8
	$\chi^2 = 6.79$ ($p < .01$)	

[a] Median is based on the total sample ($N = 100$).

groups are different in regard to range of plans and number of interpersonal plans. Median tests yield chi squares of 8.07 and 6.79, which are significant at the .005 and .01 levels of confidence, respectively. The subjects in the High-*M* group cited more plan-areas and more interpersonal plans than the subjects in the Low-*M* group.

There appeared to be a slight trend for more subjects in the High-*M* group to give long-range plans than in the Low-*M* group, but the chi square of 1.15 is clearly insignificant. Although the finding may reflect the true state of affairs in regard to this variable, it should be pointed out that, in addition to being quite crude, the measure of long-range plans that was employed showed the lowest interview-reinterview reliability.

A further analysis of the data indicates that those individuals who were above the median on range of plans also tended to be above the median on number of interpersonal plans. The trend was significant at the .02 level of confidence ($\chi^2 = 5.67$). The relationship is quite understandable when the scoring of range of plans is taken into consideration. As the number of areas encompassed by the subject's plans, its scoring is partly derived from such plan-areas as family, marriage, and socialization, which directly reflect interpersonal plans. Thus, the two variables, range of plans and interpersonal plans, show a certain amount of overlap in terms of the interpersonal factor.

The results, thus, provide strong support for Hypothesis 4. It was found that the High-*M* producers showed a greater tendency to project themselves beyond their problems into the future, as attested by their giving more plan-areas and more interpersonal plans than the Low-*M* producers. No relationship was found between *M* and what was termed "long-range plans."

Analysis of M and H as Independent Scores

An *M* response usually includes a human percept (*H*). The principal exceptions are animals (*A*) in human-like activity and movement seen in part-human percepts (*Hd*), for example, a waving hand. A correlational analysis of *M* and *H* scores by Stein (41), in which the *r*'s ranged from .87 to .93, suggests that *M* is a "redundant" scoring category. The results of an experimental study by Levy also indicate that the number of *M* is a "function of the tendency of the individual to perceive human figures in ambiguous visual stimuli" (23, p. 470). Thus, the question arises as to whether any relationships obtained between *M* and various psychological dimensions are independent of the content score *H*.

Table 12 gives an indication of the relationship between the *M* and *H* scores in the total sample of 100 subjects when both distributions are classified into four categories. The contingency coefficient computed from this table is .745, with the maximum possible coefficient for data with four categories being .866. When

TABLE 12

MATRIX OF JOINT OCCURRENCES OF *M* AND *H* CATEGORIES

Categories of *H*	Categories of *M*			
	0-*M*	1-*M*	2-*M*	3-*M* & over
0-*H*	18	0	0	0
1-*H*	6	19	3	1
2-*H*	2	4	10	6
3-*H* & over	0	2	5	24

the distributions of the *H* scores of the 30 High-*M* and 30 Low-*M* subjects are plotted, overlap occurs at only one point. A total of four Low-*M* subjects (13⅓%) and six High-*M* subjects (20%) fall at "2-H." No overlap, then, exists between 86⅔% of the Low-*M* and 80% of the High-*M* groups.

Although the distributions of both the *M* and *H* scores are positively skewed to a pronounced degree, further explorations were made with product-moment correlations. For the total sample of 100, the *r* between *M* and *H* is .86, which is of the same order as the correlations reported by Stein. When *Hd* is added to *H*, the correlation between *M* and this composite human score (*H* + *Hd*) drops to .67. This drop is due to the low relationship between *M* and *Hd* ($r = .21$). Similarly, the *r* between *H* and *Hd* is .15. An independent sample of 54 Rorschach protocols was drawn from the hospital files, and the correlational analysis was repeated. The sample consisted of the Rorschachs administered to 12 normals (hospital attendants) and 42 neuropsychiatric patients of various types, other than cases with organic involvement. As can be seen, the correlations are quite similar: *M* vs. *H*, .92; *M* vs. *H* + *Hd*, .65; *M* vs. *Hd*, .31; and *H* vs. *Hd*, .23.

The preceding findings show that when a human figure is seen on the Rorschach, the probability is very high that movement will be ascribed to it. The magnitude of the relationship makes it doubtful that the number of *M*, as a Rorschach score, has any meaning in addition to that possessed by the number of *H*. On the other hand, the relationship between *M* and *Hd* seems to be sufficiently low that the number of *Hd* could be related to some personality variable not predictable from the number of *M* or *H*.

DISCUSSION

Results

In general, the obtained results can be described as being highly positive. However, a word of caution seems appropriate, especially when the results are considered in the context of other Rorschach research. The literature reveals that replications and crossvalidation studies with this instrument have all too frequently yielded negative results. The conservative position would seem to be that, even though the present study stemmed from specific hypotheses, the conclusions must be offered with less than full confidence until independent support from other research is available.

A statistical analysis, which was incidental to the hypothetical considerations, revealed that the number of *M* and *H* are highly related, the correlation being of the order of a reliability coefficient. It is questionable that any relationships obtained between *M* and other variables are independent of *H*. Similar conclusions have been reached by Levy (23) and Stein (41). The analysis further showed that both the number of *M* and *H* are relatively independent of the number of part-human percepts (*Hd*), so it is

possible that *Hd* may have a separate psychological meaning. The suggestion is that the elimination of the long-entrenched Rorschach practice of tabulating the number of *M* (one that this author has followed) would result in a less complex scoring system without loss of information. The issue is actually of little consequence to the theoretical position and findings of the present study. What has been posited for *M* in terms of meaning can just as readily be attributed to *H*, and such a theoretical operation seems simpler and more straightforward. It should be pointed out that the issue is one of economy of quantitative symbols; it may well be that some type of qualitative analysis of movement responses could be a meaningful one.

A problem of measurement arises in regard to other instruments which have been devised for the study of human movement. The Levy Movement Blots (**34**), which represent one such method, deviate from the Rorschach procedure both in terms of blot stimuli and the instructions given the subject. It has been suggested that the important difference is one of instructions (**19**). Whereas on the Rorschach the subject in essence is asked, "Tell me what you see," the Levy Movement Blots provide a different and more restricted set as attested by the following instructions: "What are the people doing?" The available evidence points to no relationship between the perception of human movement on the Rorschach and on the Levy Movement Blots (**1, 19**). Therefore, it should be emphasized that the theoretical framework employed in this investigation applies only to human movement elicited in perceptual tasks similar in principle to the Rorschach procedure.

The findings seem to be most ambiguous in regard to the relationship between *M* and the time dimension of the basic interpretation. It was suggested that due to the possible importance of interpersonal events as cues for other events, *M* could be related to more than just "interpersonal" time. For example, to the extent that past events become sequentially interrelated, the awareness of past interpersonal experiences would facilitate one's becoming aware of other past events, both interpersonal and non-interpersonal. Not too much clarification is provided by the results. The data pertaining to the origin of the problem revealed that *M* is related to the tendency to associate "distant" past experiences with problems, regardless of whether the experiences were interpersonal or non-interpersonal. At the same time, significantly fewer non-interpersonal events from the past (and not related to *M*) were associated with problems. No additional light is thrown on this question by the data pertaining to the future, i.e., the plans and goals of the subjects.

Implications

The implications of the findings for some of the present notions about prognosis in psychotherapy seem readily apparent. In the dynamic or "deep" psychotherapeutic approach, the concept of "insight," which essentially refers to the patient's level of understanding of his problem, is considered to be a crucial variable. Due to the current conceptual framework concerning the nature and origin of psychiatric illnesses, insight is defined in terms of such criteria as the degree to which the patient recognizes interpersonal conflicts in his problem and the degree to which he considers his problem in terms of childhood and adolescent influences. It can be seen that *M*,

in terms of its relationship to the individual's perception of the nature of his problem and the origin of his problem, shares common ground with this concept. Further, one of the goals in psychotherapy is to provide the patient with insight, or more insight, and the patient's interpersonal fantasy resources should serve as a mechanism for achieving this end. In psychoanalytic therapy, the importance of such resources is emphasized by the fact that one phase of this type of treatment is devoted to "working through" anxiety-laden interpersonal experiences. The relationship between *M* and the individual's ability to deal with the future enters the psychotherapeutic picture when it is considered that the final stage of treatment is frequently focused on the patient's plans and goals. Thus, on the basis of the obtained relationships between *M* and the individual's orientation to his psychiatric illness, *M* could be an important variable for predicting psychotherapeutic behavior.

The interpretation of *M* that was formulated and the subsequent empirical findings suggest that *M* may have implications for some of the more traditional areas of psychology. The psychology of thinking especially comes to mind. Singer and Spohn (**39**) note that some current theories of thinking show a certain amount of compatibility with a relationship between *M* and thinking. Piaget (**29**), Murphy (**27**), and others consider the development of thinking or planful fantasy to be a concomitant of the increased restriction of the child's motor behavior, and Singer and Spohn point out that *M* is usually first produced by children at the age of six, a period when physical motility is rigorously restrained due to school attendance. Further, considerable evidence has been compiled showing a relationship between motor inhibition and the production of *M* responses with normal adults and neuropsychiatric patients (**26, 38, 39**). Perhaps this attempt to associate *M* with thinking is somewhat strained. However, the basic interpretation of *M* used in this investigation can be viewed as referring in essence to "thinking" in the interpersonal sphere, and the results can be considered to reflect the relationship between the number of *M* and differences in "thinking" about psychiatric problems.

The methodology developed and employed in this investigation also seems to warrant some attention. Although the interview has undoubtedly been the most widely used personality assessment technique, it seems safe to say that its value as a research tool has been questionable. Its usefulness is certainly not supported by research results (**15**). Typically, no serious attempt is made to control the interview, its structure being mainly dictated by the individual interviewers. As pointed out by Kelly (**15**), the methodology in such situations does not involve merely the interview, being more properly described as a "technique-user combination." The result in terms of reliability is that in these studies inter-interviewer agreement is characteristically quite low. By using a controlled interview, this investigation obtained reliable measurements, with the results demonstrating that the interview can be a worthwhile instrument in research.

Summary

Validation studies have failed to provide consistent support for any of the interpretations of the human movement response (*M*) posited by Rorschach. The

purpose of this investigation was to revise the interpretation of *M* and to provide an empirical test of this new interpretation.

The area of interpersonal relationships was suggested as a fruitful frame of reference for this redefinition by some current theoretical positions, as well as some research findings. After making a distinction between universal and collateral meanings, the following basic interpretation of *M* was offered: The ability in fantasy to project the self into time and space in the interpersonal sphere. This redefinition of the meaning of *M* led to the formulation of four hypotheses concerning the neuropsychiatric patient's orientation to his problem (illness). Specifically, the hypotheses were focused on the relationship of *M* to the perception of the nature of the problem, the perception of the origin of the problem, the reaction to the problem, and the view of the future.

The principal instrument selected for obtaining the data to test the hypotheses was the controlled interview. An interview outline or schedule was constructed as a guide for the interviewers, who were systematically rotated. Within 48 hours of the interview, all subjects were administered the Rorschach and Wechsler-Bellevue Verbal Scale (Form I). The *M* response and the measurements derived from the interview were found to possess, in general, an adequate level of interrater and test-retest reliability.

The preliminary subjects consisted of 100 recently hospitalized, functional neuropsychiatric patients. On the basis of Rorschach performance, High-*M* and Low-*M* groups, consisting of 30 subjects each, were selected. The criteria for selection were three or more *M* for the High-*M* group and one or zero *M* for the Low-*M* group. The two groups were equated for age, education, intelligence, diagnostic status, cooperation, confusion, and nine Rorschach variables.

All the hypotheses were either confirmed or strongly supported. The findings can be summarized as follows.

a. Nature of the problem (Hypothesis 1): High-*M* producers showed a greater tendency to recognize their problems as involving disturbances in interpersonal relationships than Low-*M* producers.

b. Origin of the problem (Hypothesis 2): High-*M* producers showed a greater tendency to project themselves backward in time in accounting for the origins of their problems than Low-*M* producers.

c. Reaction to the problem (Hypothesis 3): High-*M* producers showed a greater tendency to utilize interpersonal fantasy in coping with their problems than Low-*M* producers. The type of interpersonal fantasy that was related to *M* was shown by the results to be restricted to that involving problem-solving or reality processes, as opposed to the daydreaming or nonreality type.

d. View of the future (Hypothesis 4): High-*M* producers showed a greater tendency to project themselves beyond their present problems into the future than the Low-*M* producers. The results revealed that *M* was positively related to the range of plans and the number of interpersonal plans given by the subjects, while the relationship of *M* to a third measure, long-range plans, was in the predicted direction but not statistically significant.

In discussing the findings, some caution was suggested in terms of accepting the results without independent support from other research. Some of the problems involved in using both *M* and *H*

as Rorschach scores were considered. Attention was also drawn to the equivocal nature of some of the data in regard to the relationship between *M* and the time dimension in the interpretation.

The implications of the obtained results were considered in terms of the possible relationship of *M* to behavior in psychotherapy and the relationship between *M* and the psychology of thinking. It was also pointed out that the methodology developed and employed in this investigation demonstrates that the controlled interview, by providing reliable measurements, can be a useful research instrument.

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